



BACKUP PLAN FOR PRODUCT GENERATION

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TOPICS TO BE COVERED

- **Recap of initial plan**
- **Emergency plan**
- **Dependencies**
- **Support for validation and early science results**
- **Issues and concerns**

- **Activity distributed between DAAC and SCF:**

SCF: All standard calibration-mode products (3 PGEs)

DAAC: All standard science-mode products (10 PGEs)

Ingest, processing, archiving, distribution (to science team only)

One orbit per day average, beginning $\approx L+1M$

- **All essential production including early mission support**

Calibration: - Radiometric calibration, ≈ 12 sequences in first 2 months with science processing through Level 1B1

- First stage of geometric calibration, covering 50 GCPs in first month, science processing through Level 1B1

- Partial orbits acceptable

Validation and science:

- No global coverage but various meaningful scenarios possible

- E.g., one orbit per day permits coverage of continental U.S.A. in 1 month, thereby permitting monthly Level 3 products of this area

- Some coordinated multi-instrument work also possible on selected targets.

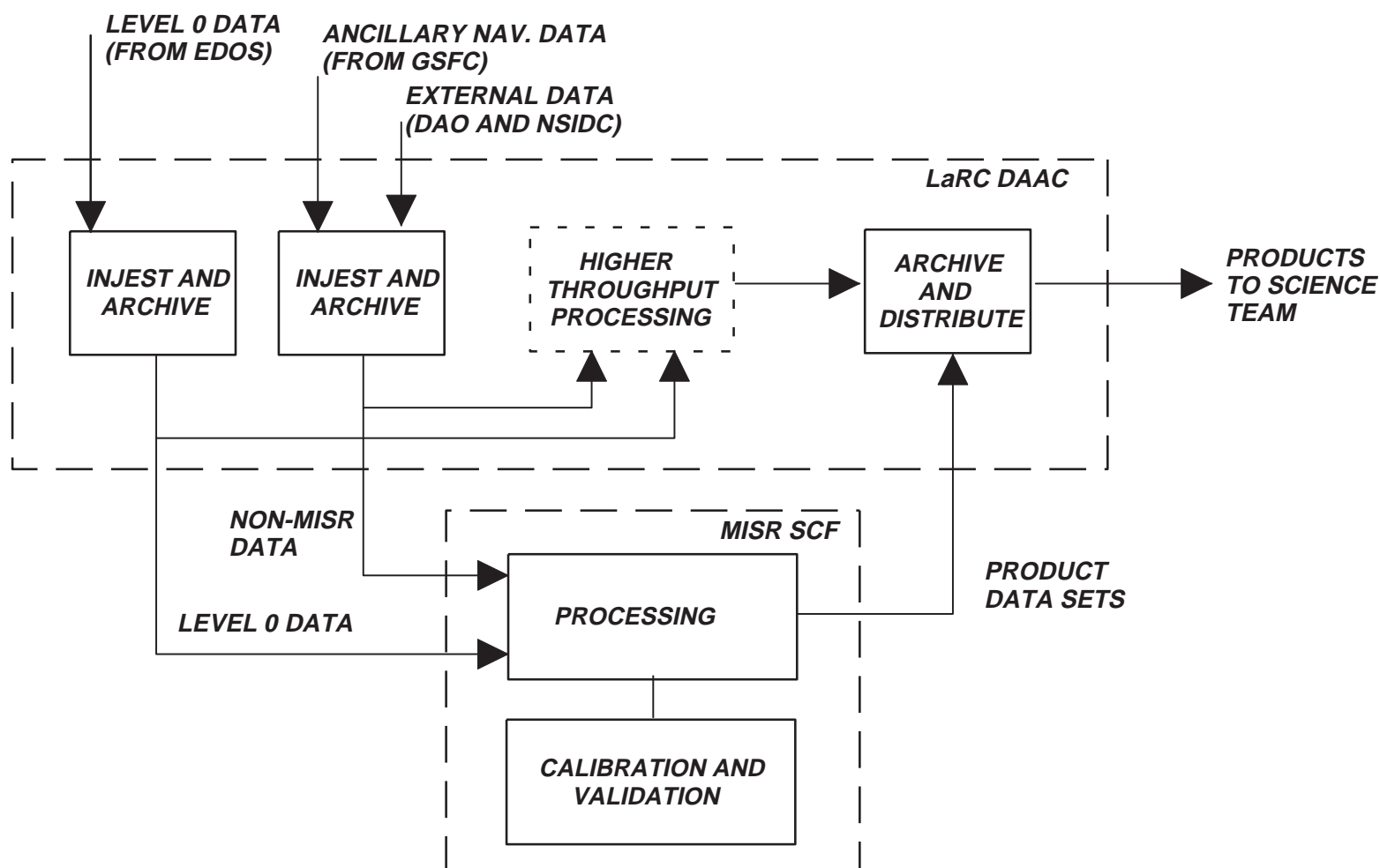
- Local Mode (high resolution) limited to ≈ 6 sites (instead of 100)

- **At the SCF: All essential processing for calibration and validation**
 - Most initial products for calibration, beginning at L+1M, with preliminary geometric calibration going through to \approx L+4M. This requires processing through only Level 1B1 and occasionally 1B2, and includes Local Mode sites
 - Science/validation processing to Level 2 will be gradually phased in, and could be routinely 1 or 2 swaths per week, plus a few Local Mode sites, by L+3M
 - This approach maximizes Science Team involvement in proving the products

- **At the DAAC: Ingest, archiving, distribution, possibly additional processing**
 - Archiving of L0 data, selected orbits sent to SCF for processing
 - Products archived and distributed to Science Team
 - Additional science-mode processing through Level 3 possible at the DAAC on an as-available basis, details and potential capacity yet to be studied

- **Benefits of working with the DAAC**
 - Assists greatly in working out the long term process problems
 - Provides a path to more substantial throughput than is possible at the SCF
 - Provides a contingency for expansion in case the ECS does not materialize
 - DAAC production (albeit limited) is the only means to a routine Level 3 product

MISR EMERGENCY BACKUP OPERATIONS CONCEPT



- **SCF augmentation:**
 - Additional CPU, large on-line storage (>500GB), tape system (DLT stacker)
 - Additional T1 lines (1 T1 line would handle swath in \approx 24 hours)
 - Very basic production control, capitalizing on large on-line storage
- **DAAC augmentation:**
 - Use “spare” capacity of existing system, including archive storage and distribution system
 - May add additional processing if this can be afforded, to allow production beyond that possible at the SCF
- **Staffing needs:**
 - At SCF: System designer/engineer/programmer now
 Operator + data coordinator in early 1998
 - At DAAC: Use existing DAAC staff

AREAS WHERE AUGMENTATION REQUIRED WITH ESDIS ASSISTANCE

- **Ingest**
 - Level 0 data required at DAAC, delivered electronically
 - Spacecraft ancillary data required at SCF and DAAC
 - DAO and NSIDC data required at SCF and DAAC
- **Networking**
 - Additional ~three T1 lines (or equivalent) required between DAAC and SCF

ASSUMPTIONS

- **DAAC can utilize existing augmented resources to support MISR's emergency plan**
- **DAAC can use existing interfaces for ingesting L0 data from EDOS**

- **Multi-instrument coordinated imagery:**
 - Supported, but scope is limited
- **Basic validations:**
 - Fully supported
- **Examples of Level 2 products, some coordinated between instruments:**
 - Fully supported, but scope may be limited
- **Level 3 global time-dependent products:**
 - Not meaningful
 - May be possible if DAAC has available capacity/resources

- There may be difficulty in obtaining appropriate new staff at JPL at short notice
- Inability to guarantee a routine (e.g. monthly) Level 3 product for a significant portion/part of the Earth limits the scope for public exposure
- Without DAAC involvement, there is no realistic contingency allowing for expansion of the SCF for larger-scale production in the case where ECS is not available to support the mission



COVERAGE OF 16 MISR SWATHS OVER NORTH AMERICA

